

INSTRUCTION MANUAL

10" Band Saw

(Model 28-195)



PART NO. 902127 (0112)
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ESPAÑOL: PÁGINA 23

GENERAL SAFETY RULES

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. **REMEMBER:** Your personal safety is your responsibility.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

Technical Service Manager

Delta Machinery
4825 Highway 45 North
Jackson, TN 38305

(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)

WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

1. FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. KEEP GUARDS IN PLACE and in working order.

3. ALWAYS WEAR EYE PROTECTION. Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. **NOTE:** Approved glasses have Z87 printed or stamped on them.

4. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on".

5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

6. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILDPREOF – with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL. It will do the job better and be safer at the rate for which it was designed.

10. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

13. DON'T OVERREACH. Keep proper footing and balance at all times.

14. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters, etc.

16. USE RECOMMENDED ACCESSORIES. The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.

17. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in "OFF" position before plugging in power cord. In the event of a power failure, move switch to the "OFF" position.

18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

22. STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL. DO NOT USE TOOL WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION. A moment of inattention while operating power tools may result in serious personal injury.

23. MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.

24. THE DUST GENERATED by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

25.  WARNING: SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAVE THESE INSTRUCTIONS.

Refer to them often and use them to instruct others.

ADDITIONAL SAFETY RULES FOR BAND SAWS

 **WARNING:** FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS MACHINE UNTIL** it is assembled and installed according to the instructions.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not familiar with the operation of this tool.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections.
4. **USE THE GUARDS WHENEVER POSSIBLE.** Check to see that they are in place, secured, and working correctly.
5. **USE PROPER BLADE SIZE** and type.
6. **ADJUST THE UPPER BLADE GUIDE** so that it is about 1/8" above the workpiece.
7. **PROPERLY ADJUST** the blade tension, tracking, blade guides, and blade support bearings.
8. **KEEP ARMS, HANDS, AND FINGERS** away from the blade.
9. **AVOID AWKWARD OPERATIONS** and hand positions where a sudden slip could cause a hand to move into the blade.
10. **NEVER START THE MACHINE** before clearing the table of all objects (tools, scrap pieces, etc.).
11. **NEVER START THE MACHINE** with the workpiece against the blade.
12. **HOLD WORKPIECE FIRMLY** against the table. DO NOT attempt to saw a workpiece that does not have a flat surface against the table.
13. **HOLD WORKPIECE FIRMLY** and feed into blade at a moderate speed.
14. **NEVER REACH UNDER THE TABLE** while the machine is running.
15. **TURN THE MACHINE "OFF"** to back out of an uncompleted or jammed cut.
16. **MAKE "RELIEF" CUTS** prior to cutting long curves.
17. **TURN THE MACHINE "OFF"** and wait for the blade to stop prior to cleaning the blade area, removing debris near the blade, removing or securing workpiece, or changing the angle of the table. A coasting blade can be dangerous.
18. **NEVER PERFORM LAYOUT, ASSEMBLY,** or set-up work on the table/work area when the machine is running.
19. **TURN THE MACHINE "OFF" AND DISCONNECT THE MACHINE** from the power source before installing or removing accessories, before adjusting or changing set-ups, or when making repairs.
20. **TURN THE MACHINE "OFF"**, disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use.
21. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this tool is available from the Power Tool Institute, 1300 Summer Avenue, Cleveland, OH 44115-2851. Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.

**Refer to them often
and use them to instruct others.**

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the motor.

⚠️ WARNING: DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your machine is wired for 120 volt, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠️ WARNING: THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

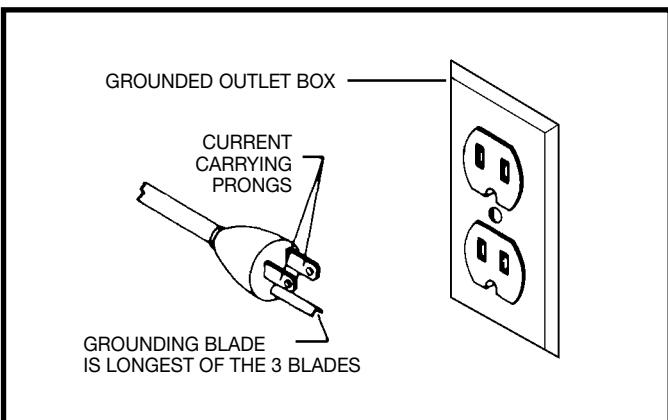


Fig. A

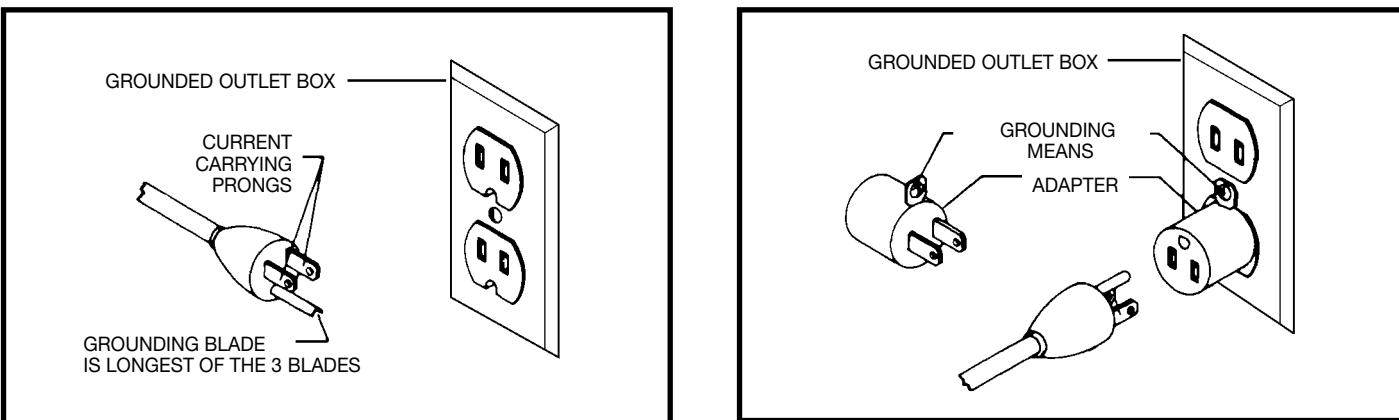


Fig. B

EXTENSION CORDS

Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D, shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. D

OPERATING INSTRUCTIONS

FOREWORD

Delta Model 28-195 is a 10" Band Saw. The Delta Model 28-195 has a powerful 1/2 HP, ball-bearing motor for smooth performance and longer life. The 28-195 is supplied with a sturdy steel stand which provides heavy-duty support and a comfortable work height.

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

NOTICE: THE MANUAL COVER PHOTO ILLUSTRATES THE CURRENT PRODUCTION MODEL. ALL OTHER ILLUSTRATIONS ARE REPRESENTATIVE ONLY AND MAY NOT DEPICT THE ACTUAL COLOR, LABELING OR ACCESSORIES.



Fig. 2

For Fig. 2

- 1 - Band Saw
- 2 - Table
- 3 - Miter Gage
- 4 - Table Insert

For mounting machine to stand

- 5 - M8 x 35mm hex head bolts (4)
- 6 - M8 flat washers (8)
- 7 - M8 hex nuts (4)

For mounting table to trunnions

- 8 - M6 x 16mm hex head bolts (4)
- 9 - M6 flat washers (4)

For mounting lamp to machine

- 10 - M6 x 12mm sheet metal screw (2)
- 11 - M6 lockwasher (2)

For aligning table

- 12 - M6 x 30mm button head bolt (1)

- 13 - M6 flat washer (1)
- 14 - M6 wing nut (1)

15 - Hex wrench

16 - Lamp

* Cord clamp

* Not shown

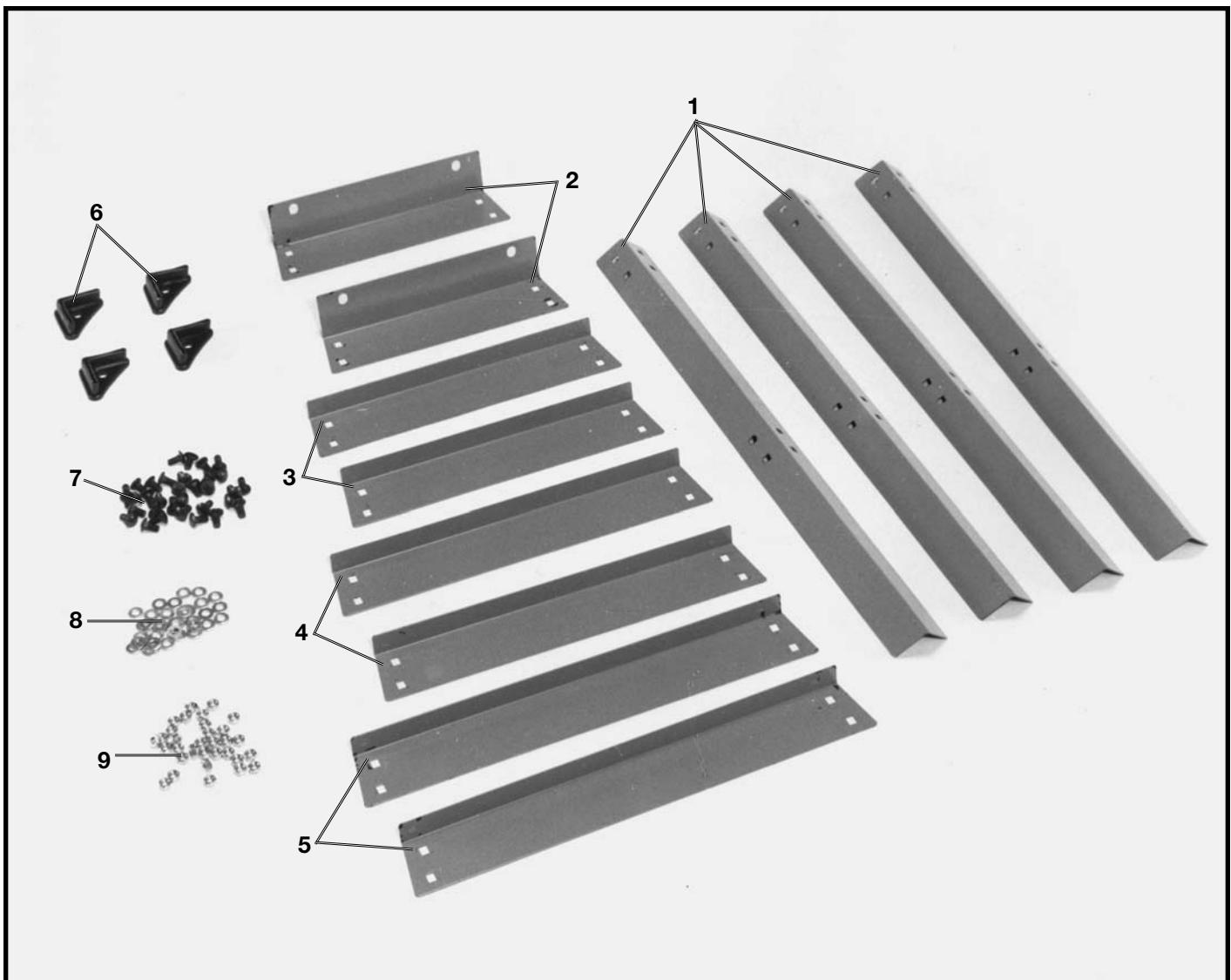


Fig. 3

For Fig. 3

- 1 - Stand legs (4)
- 2 - Upper braces for stand (2), 10-3/4"
- 3 - Upper braces for stand (2), 13-9/16"
- 4 - Lower braces for stand (2), 15-3/4 "
- 5 - Lower braces for stand (2), 18-5/16"
- 6 - Feet (4),
- 7 - M8 x 20mm carriage bolts (32)
- 8 - 3/8 flat washers (32)
- 9 - M8 hex nuts (32)

ASSEMBLY INSTRUCTIONS

⚠WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE MACHINE TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE OWNER'S MANUAL.

ASSEMBLING STAND AND FEET

1. Assemble the stand, as shown in Fig. 4, using the 32 M8x20mm Carriage head screws, 3/8" flat washers and M8 hex nuts supplied. The two 10-3/4 long upper braces (A); 13-9/16 long upper braces (B); 15-3/4 long lower braces (C); and 18-5/16 long lower braces (D) should be fastened to the four legs (E). Insert the carriage bolts through the legs and braces, place flat washer on carriage bolt and secure with nut. **IMPORTANT:** The top lips of the two upper braces (A) should be on top of the top lips of upper braces (B).

2. Assemble the four feet (F) Fig. 4, to bottom of each leg (E), as shown.

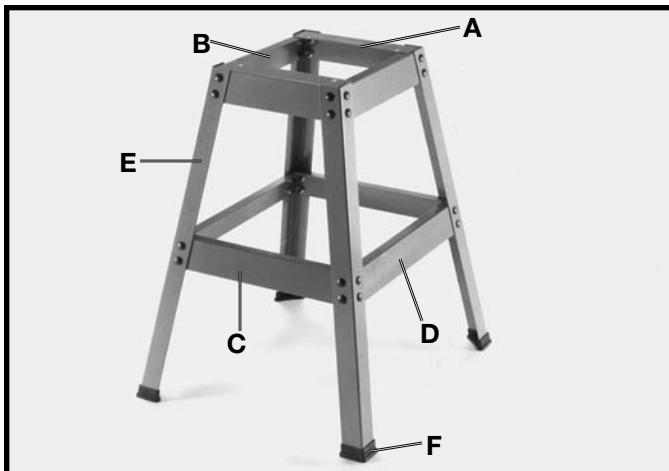


Fig. 4

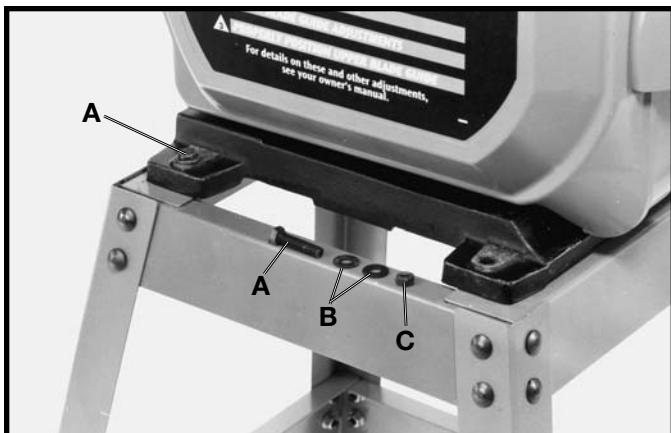


Fig. 5

ASSEMBLING BAND SAW TO STAND

1. Place the band saw on top of the stand and line up the four holes, located on the feet of the band saw, with the four holes located on top of the stand.

2. Fasten the band saw to the stand using the four M8 x 35mm hex head bolts (A) Fig. 5, eight M8 flat washers (B) and four M8 hex nuts (C), supplied. Place an M8 flat washer on the hex head bolt and insert bolt through hole on the band saw feet and hole in the stand. Place a flat washer on the hex head bolt that has been inserted through the saw and stand and secure with M8 hex nut.

3. Figure 6 illustrates the band saw assembled to the stand.



Fig. 6

ASSEMBLING TABLE TO MACHINE

1. Slide table (A) Fig. 7, into position on band saw trunnions, as shown.

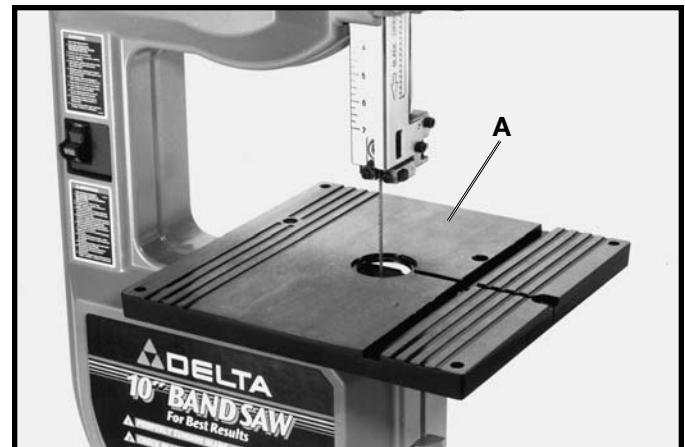


Fig. 7

2. Line up the four threaded holes in bottom of table with four holes in table trunnions (B) Fig. 8, and fasten the table to the trunnions using the four M6 x 16mm hex head bolts (C) and M6 flat washers (A), three of which are shown.

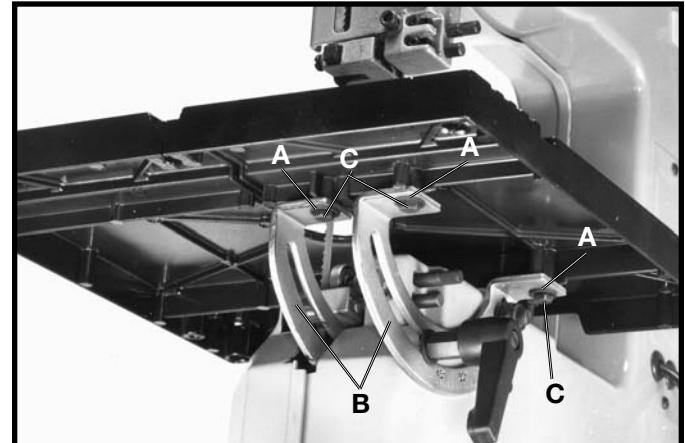


Fig. 8

ASSEMBLING TABLE INSERT

1. Place table insert (A) Fig. 9, in opening of table.
NOTE: A notch (B) is provided on insert that engages with dimple (C) in table opening.

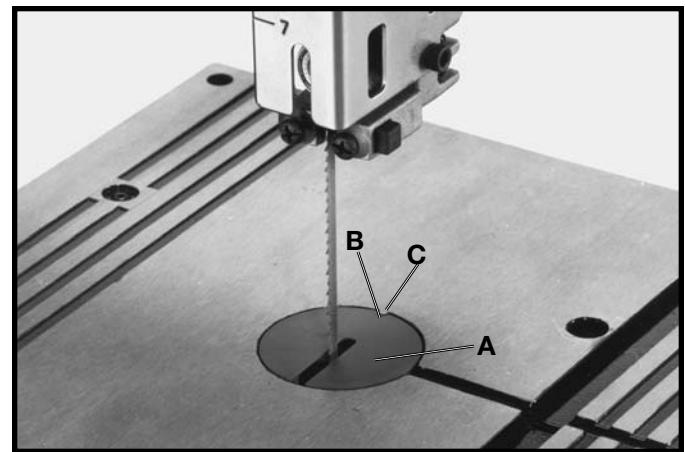


Fig. 9

ASSEMBLING TABLE ALIGNMENT SCREW

Insert M6 x 30mm button head bolt (A) Fig. 11, down through hole in table, as shown, and place a M6 flat washer (C) onto bolt from underneath table and fasten in place with an M6 wing nut (B).

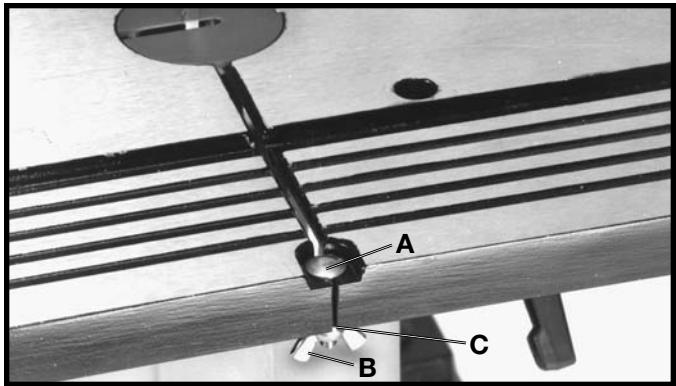


Fig. 11

ASSEMBLING LAMP TO MACHINE

1. Assemble the lamp bracket (A) Fig. 12, to the two holes located on the back top cover of the machine. Fasten the lamp bracket to the back top cover using two M6 x 12 sheet metal screws (B) and M6 lockwashers (C) and tighten.
2. Peel backing from cord clamp (C) Fig. 13, and stick cord clamp (C) onto rear of top cover in a position that will redirect lamp cord (D) out of the way of the band saw table. Then assemble cord (D) to cord clamp (C) as shown.
3. The flexible lamp operates independently of the band saw. To turn the lamp “ON” and “OFF”, rotate switch (E) Fig. 13.

WARNING: To reduce the risk of fire, use 40 watt or less, 120 volt, track type light bulb (not supplied). A standard household light bulb should not be used. The track type bulb should not extend below the lamp shade (F).

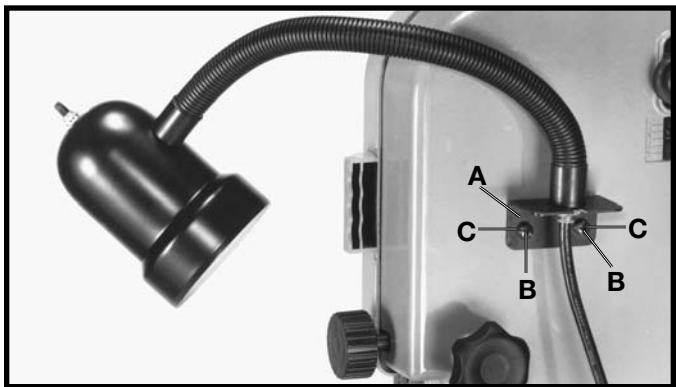


Fig. 12

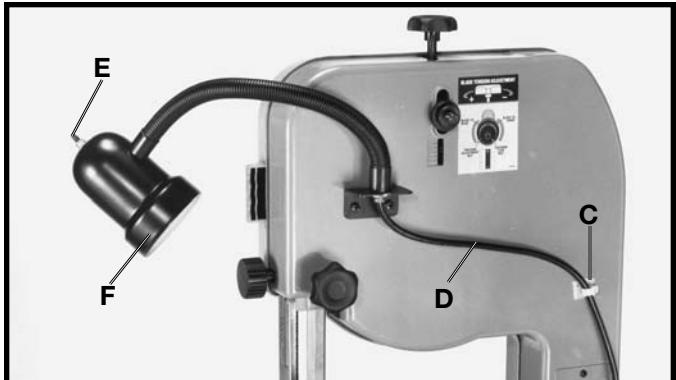


Fig. 13

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING SAW

The switch (A) Fig. 17, is located on the front side of the band saw. To turn the saw "ON" move the switch (A) to the up position. To turn the saw "OFF" move the switch (A) to the down position.

LOCKING SWITCH IN THE "OFF" POSITION

IMPORTANT: When the machine is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use. This can be done by grasping the switch toggle (B) Fig. 18, and pulling it out of the switch, as shown. With the switch toggle (B) removed, the switch will not operate. However, should the switch toggle be removed while the machine is running, the switch can be turned "OFF" once, but cannot be restarted without inserting the switch toggle (B).

ADJUSTING BLADE TENSION

1. With the saw blade centered on the two band saw wheels, turn the tension adjustment knob (A) Fig. 19, clockwise to increase blade tension or counterclockwise to decrease blade tension.

2. Blade tension can be checked by pushing on the blade midway between the two band saw wheels. The blade should move slightly with average finger pressure.

NOTE: Do not over tension the blade. Too much tension may cause blade breakage. Too little tension may cause the blade to slip on the wheels.

3. A series of graduation numbers (1 through 5) shown at (B) Fig. 19, can be used as reference points in determining proper blade tension for different width blades. These graduations will be accurate for average work and are not affected by re-brazing of the saw blade. You should use these graduations until you have become familiar enough with the operation of the band saw to vary the tension for different kinds of blades or work. Over tensioning is a common cause of blade breakage and unsatisfactory blade performance.

4. When the band saw is not in use, it is good practice to release tension to prolong the life of the blade and to prevent the blade from taking a set in the band saw wheels.

5. **NOTE:** Wider blades need more tension than narrow blades.

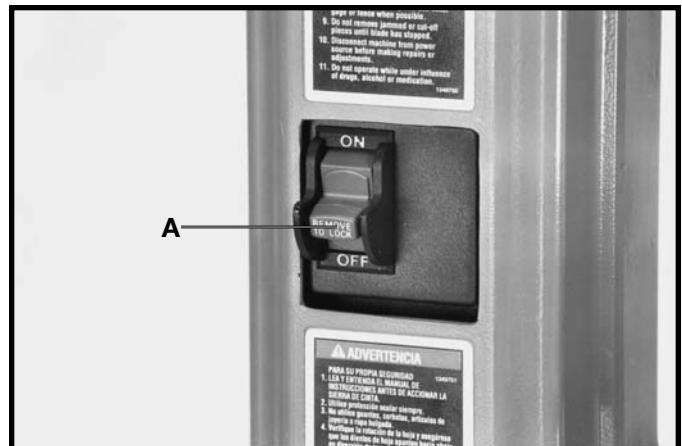


Fig. 17

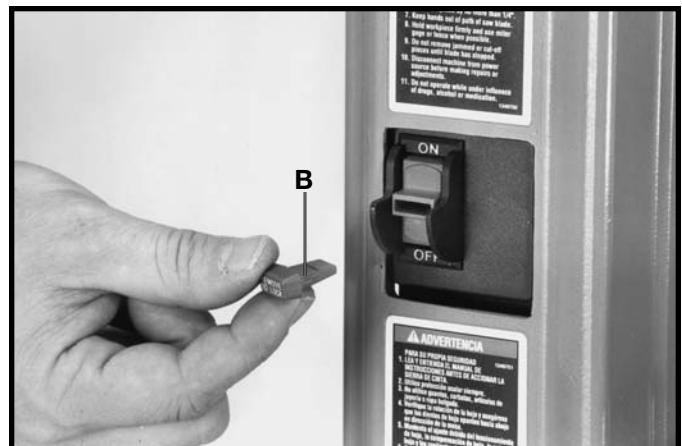


Fig. 18



Fig. 19

TRACKING THE BLADE

For accurate work and maximum blade life, it is important that the blade (A) Fig. 20, be centered on the upper band saw wheel. When this adjustment is properly made, the blade will "track" – that is, it will run steady in the same line. To "track" the blade, proceed as follows:

1. **DISCONNECT MACHINE FROM POWER SOURCE.**
2. Make sure the correct blade tension is applied to the saw blade and make sure the blade guides and blade support bearings are clear of the blade so as not to interfere with the tracking adjustment.
3. Rotate the upper wheel (B) Fig. 20, slowly by hand to determine if the blade is riding on the center of the wheel.
4. If the blade is not riding on the center of the wheel, loosen lock nut (C) Fig. 21, and while turning the upper wheel by hand, turn tracking adjusting nut (D) slightly clockwise or counterclockwise. You will notice that the saw blade will move to the right or left on the wheel. **NEVER RUN THE SAW TO TRACK THE BLADE.**
5. When the blade is tracking properly, tighten lock nut (C) Fig. 21.
6. Close wheel covers after adjustment is made.

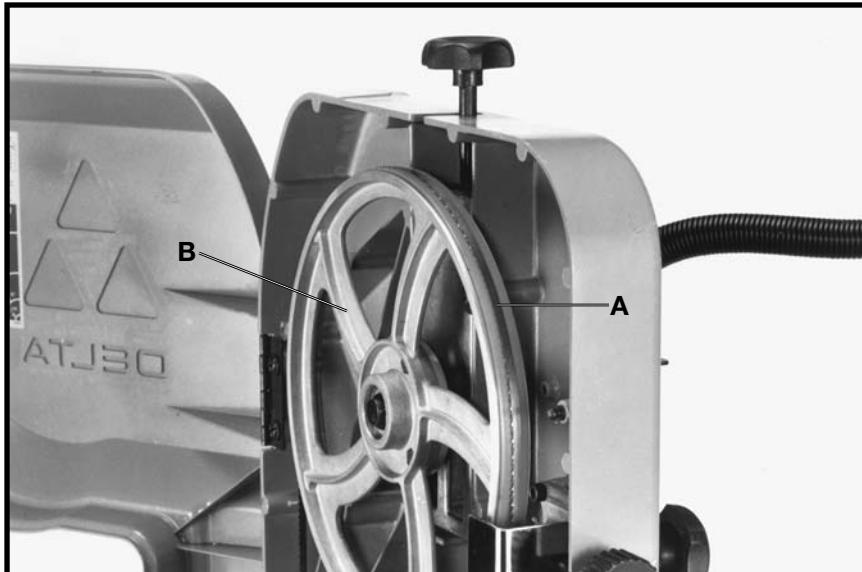


Fig. 20



Fig. 21

ADJUSTING UPPER BLADE GUIDES AND BLADE SUPPORT BEARING

The blade guides must be properly adjusted to prevent the blade from twisting during operation. The upper blade guides and blade support bearings should be adjusted only after the blade is tensioned and tracking properly. To adjust, proceed as follows:

1. DISCONNECT MACHINE FROM POWER SOURCE.

2. Remove two screws (A) Fig. 22, and remove blade guard (B) from guide assembly.

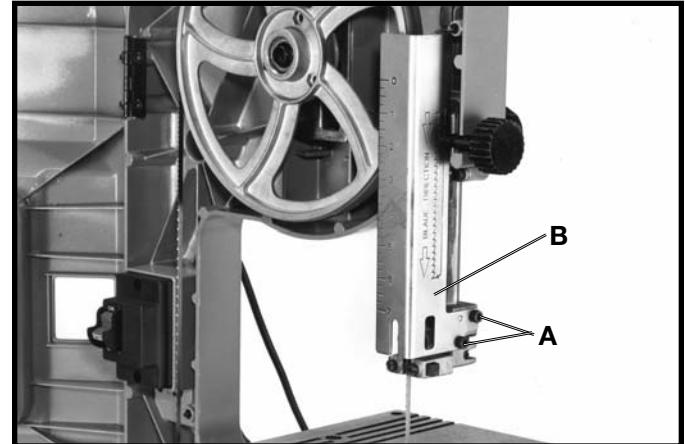


Fig. 22

3. The upper blade guides (C) Fig. 23, are held in place by means of the screws (D). Loosen screws (D) to move the guides (C) as close as possible to the sides of the blade, being careful not to pinch the blade between the guides. Then tighten the screws (D).

4. The guides (C) Fig. 23, should then be adjusted so that the front edge of the guides are just behind the "gullets" of the blade teeth. The complete guide block bracket (E) Fig. 24, can be moved in or out by loosening screw (F) Fig. 24 and moving shaft (G) Fig. 24 in or out as desired. When guides (C) Fig. 23 are set properly, tighten screw (F) Fig. 24.

5. The upper blade support bearing (H) Fig. 24, supports the back of the blade during the cutting operation and also prevents the blade from being pushed too far to the rear, which could damage the set in the blade teeth. The support bearing (H) should be set about $1/64$ behind the blade by loosening screw (J) and moving shaft (K) in or out. Then tighten screw (J).

6. The upper blade support bearing (H) Fig. 24, should also be adjusted so the back edge of the blade overlaps the outside diameter of the ball bearing by approximately $1/8$. The bearing shaft (K) is on an eccentric and to change bearing position, loosen screw (J) and rotate shaft (K) until correct adjustment is made. Then tighten screw (J).

7. **MAKE CERTAIN TO REPLACE BLADE GUARD THAT WAS REMOVED IN STEP 2.**

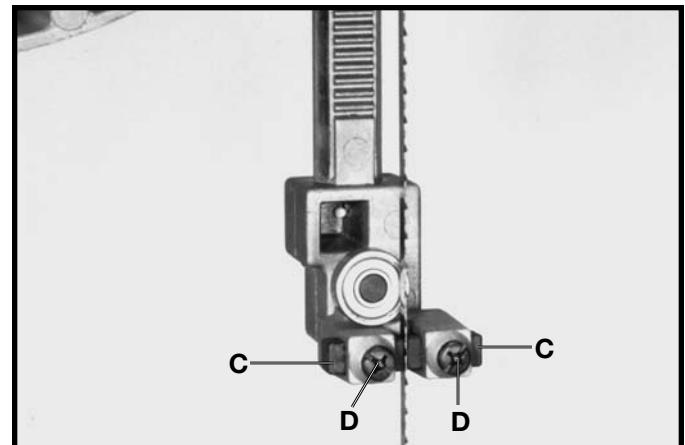


Fig. 23

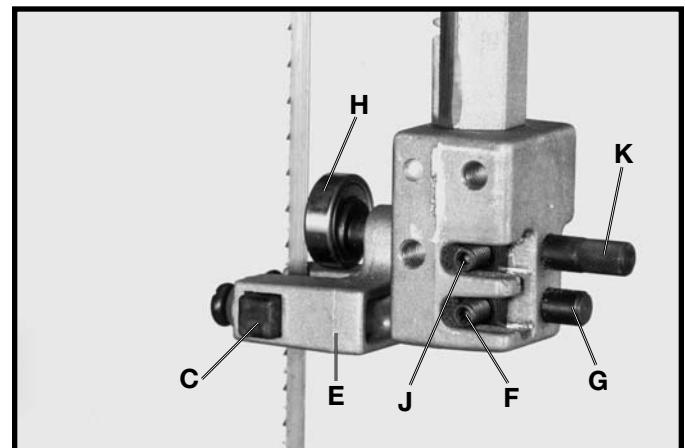


Fig. 24

ADJUSTING LOWER BLADE GUIDES AND BLADE SUPPORT BEARING

The lower blade guides and blade support bearing should be adjusted at the same time as the upper guides and support bearing as follows:

1. DISCONNECT MACHINE FROM POWER SOURCE.

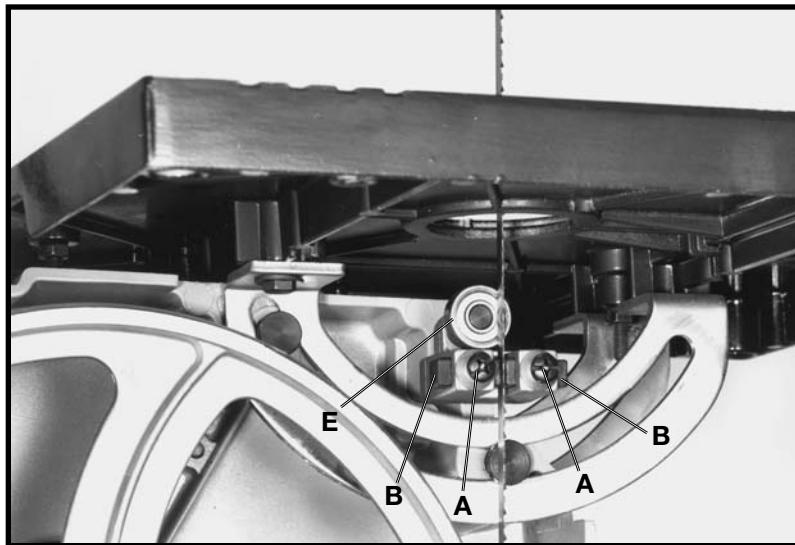


Fig. 25

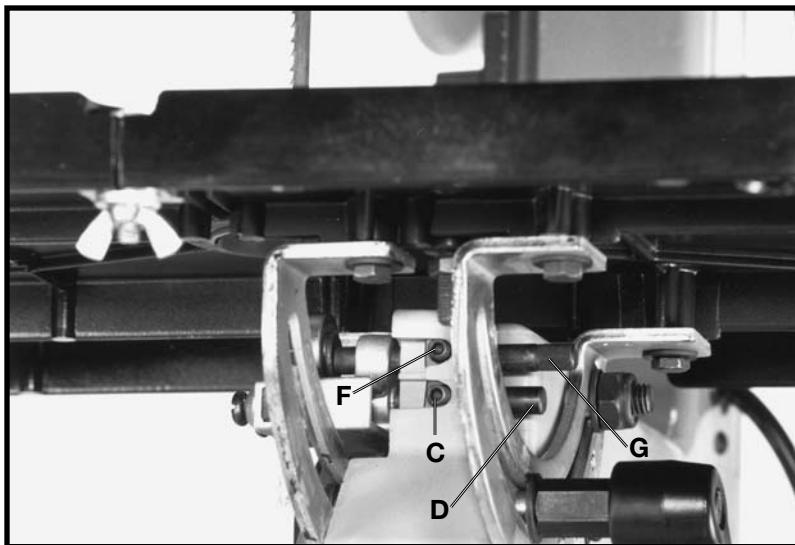


Fig. 26

2. Loosen the two screws (A) Fig. 25, and move the guides (B) as close as possible to the sides of the blade, being careful not to pinch the blade between the guides. Then tighten the two screws (A).
3. The front edge of the guide blocks (B) Fig. 25, should be adjusted so they are just behind the "gullets" of the blade teeth by loosening screw (C) Fig. 26, and moving shaft (D) in or out as desired. Then tighten screw (C).
4. The lower blade support bearing (E) Fig. 25, should be adjusted to support the rear of the blade during the cutting operation and also prevent the blade from being pushed too far to the back which could damage the set in the blade teeth. The support bearing (E) Fig. 25, should be set about $1/64"$ behind the blade by loosening screw (F) Fig. 26, and moving shaft (G) in or out. Then tighten screw (F).
5. The lower blade support bearing (E) Fig. 25, should also be adjusted so the back edge of the blade overlaps the outside diameter of the ball bearing by approximately $1/8"$. The bearing shaft (G) Fig. 26, is on an eccentric and to change position, loosen screw (F) and rotate shaft (G) until correct adjustment is made. Then tighten screw (F).

TILTING THE TABLE

The table can be tilted 48 degrees to the right and approximately 3 degrees to the left. To tilt the table, loosen lock handle (A) Fig. 27, tilt the table to the desired angle and tighten lock handle (A). **NOTE:** The table lock handle (A) can be repositioned by pulling out on the handle and repositioning it on the nut located underneath the hub of the handle. A scale (B) and pointer (C) is provided to indicate the degree of table tilt.

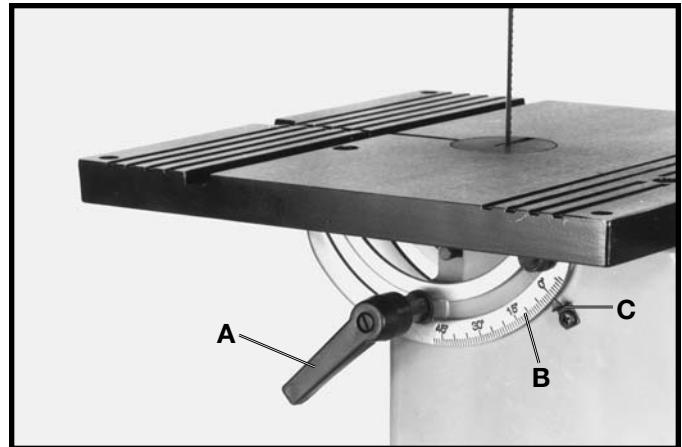


Fig. 27

ADJUSTING TABLE POSITIVE STOPS

Positive stops are provided for the table at the 90 and 45 degree angle to the blade. To check and adjust the positive stops, proceed as follows:

1. Tilt the table to the 90 degree position (all the way to the rear) and tighten lock handle (A) Fig. 28. Place a square (B) on the table and against the blade and check to see if the blade is 90 degrees to the table surface. If an adjustment is necessary, proceed as follows:
2. Tilt the table slightly forward as shown in Fig. 29. Loosen lock nut (B) and using wrench provided, turn adjusting screw (C) Figs. 28 and 29, from top of table until bottom of screw (C) contacts surface (D) when blade is 90 degrees to the table. Then tighten lock nut (B).
3. Tilt the table to the 45 degree position (all the way to the front) as shown in Fig. 30. Place a square (B) on the table and against the blade and check to see if the blade is 45 degrees to the table surface. If an adjustment is necessary, proceed as follows:
4. Loosen lock nut underneath table on bottom of adjusting screw (E) Fig. 30, and turn adjusting screw (E) with wrench (F) provided, until blade is 45 degrees to the table. After adjustment is completed, tighten lock nut underneath table on bottom of screw (E).

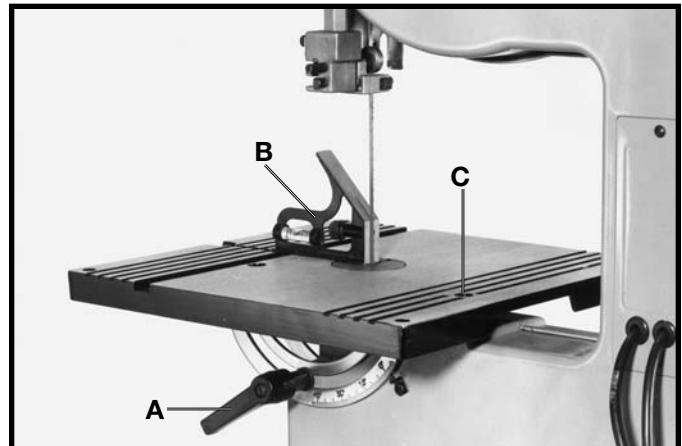


Fig. 28

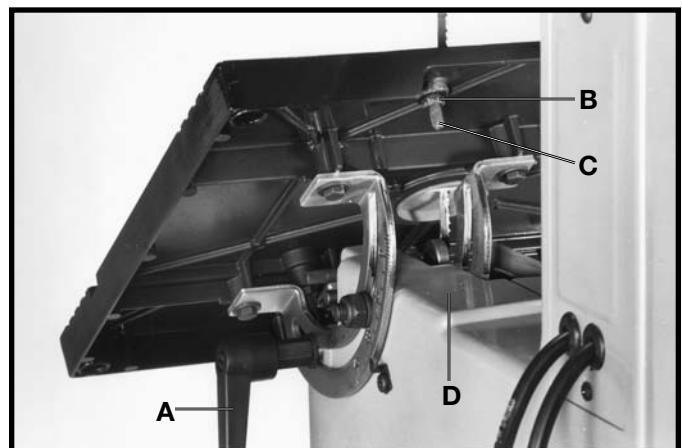


Fig. 29

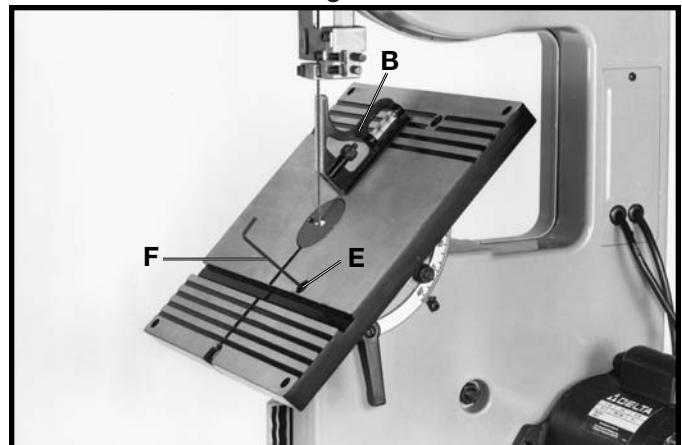


Fig. 30

ADJUSTING UPPER BLADE GUIDE ASSEMBLY

The upper blade guide assembly (A) Fig. 31, should always be set about 1/8 above or as close as possible to the top surface of the workpiece being cut. Loosen lock knob (B) and rotate adjusting knob (C) to position the guide assembly (A) at the desired height. Then tighten lock knob (B).

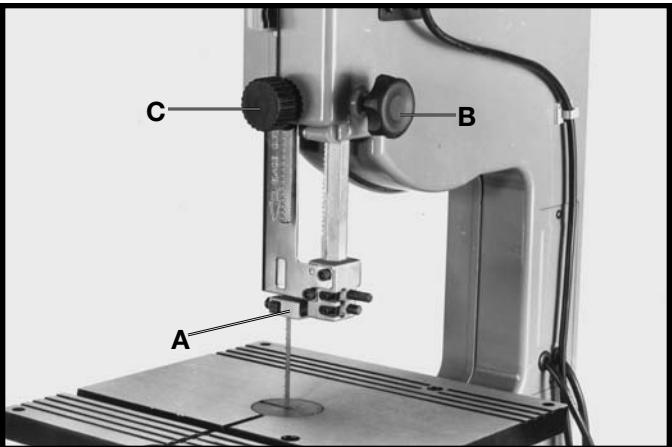


Fig. 31

CHANGING BLADES

To change blades, proceed as follows:

1. **DISCONNECT MACHINE FROM POWER SOURCE.**
2. Pull handles (A) Fig. 32, and open upper and lower wheel guards (B) as shown in Fig. 33.
3. Remove two screws (C) Fig. 34, and remove blade guard (D).
4. Release tension on the band saw blade by turning tension knob counterclockwise.
5. Remove table alignment screw (A) Fig. 11 and table insert.
6. Slip the blade off both wheels and guide it out through the slot in the table.
7. Check new blade to be sure teeth will point down towards table when installed. **IF NOT, TURN BLADE INSIDE OUT.**
8. Place new blade on wheels and adjust tension, guides and tracking as previously described.
9. Replace blade guard that was removed in **STEP 3.**
10. Close upper and lower wheel guards (B) Fig. 33, before operating.
11. Replace table insert and alignment screw (A) Fig. 11, that was removed in **STEP 5.**

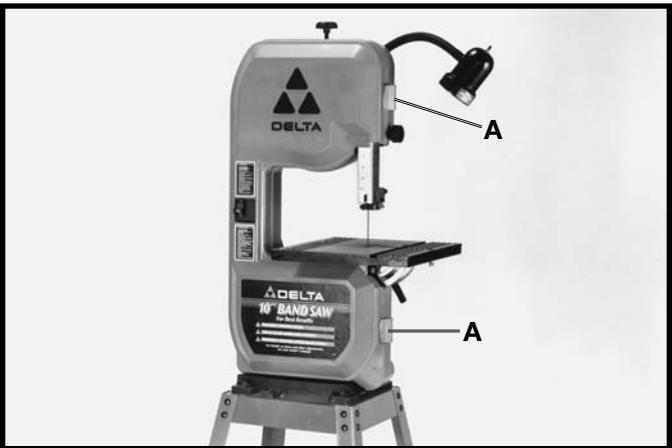


Fig. 32



Fig. 33

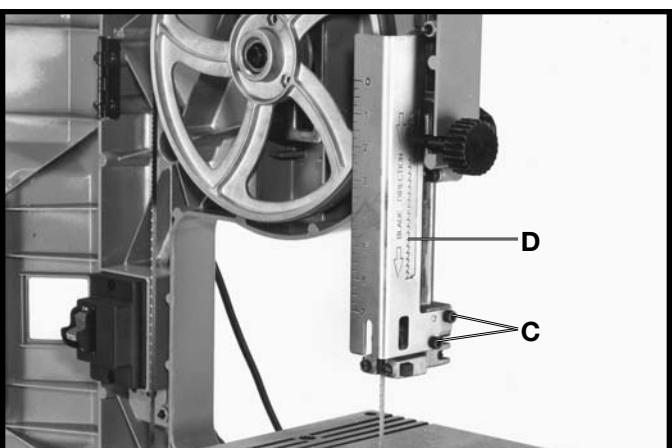


Fig. 34

MINIMUM CUTTING RADIUS

Turning radius may vary depending on the type of blade and amount of set. Each blade, however, depending on its width, can cut continuously without backtracking any curve having a radius as much or more than the specified minimum turning radius of the blade, as shown in the chart (A) Fig. 35, located inside top wheel cover.

Always use the widest blade possible and limit use of narrow blades for sawing small, abrupt curves and for fine, delicate work.

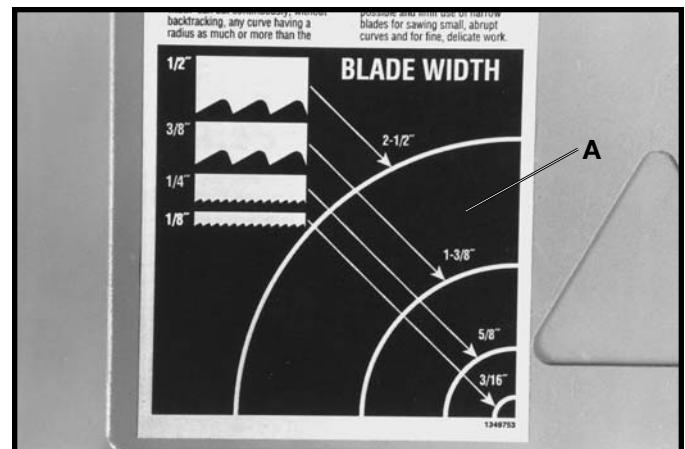


Fig. 35

ADJUSTING BELT TENSION

If the drive belt on your band saw needs adjusted, proceed as follows:

1. **DISCONNECT MACHINE FROM POWER SOURCE.**
2. The belt (A) Fig. 36, drives the saw pulley from the motor pulley. Correct tension of the belt (A) is when there is approximately 1/4" deflection in the center span of the belt (A) using light finger pressure. If the belt tension needs adjustment, loosen three screws, two of which are shown at (B) Fig. 37, and rotate motor accordingly. Tighten three screws, two of which are shown at (B) when adjustment is completed.



Fig. 36

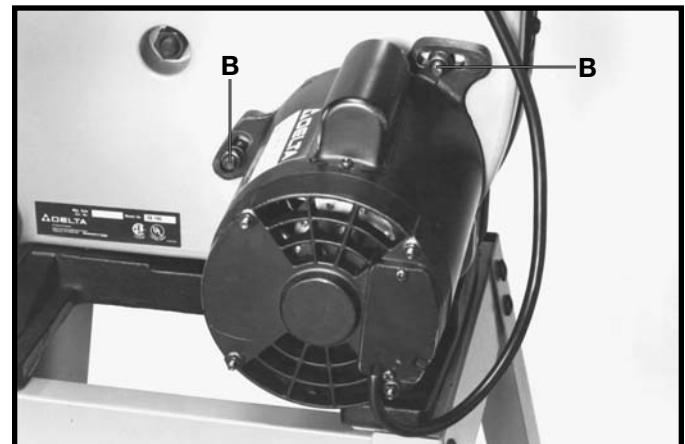


Fig. 37

TIRE BRUSH

A tire brush (A) Fig. 38, is provided on the lower wheel to keep the blade and tires clean and free of any build-up of chips. Adjustment of the brush (A) can be made by loosening the mounting hardware (B) and adjusting the brush (A) accordingly.

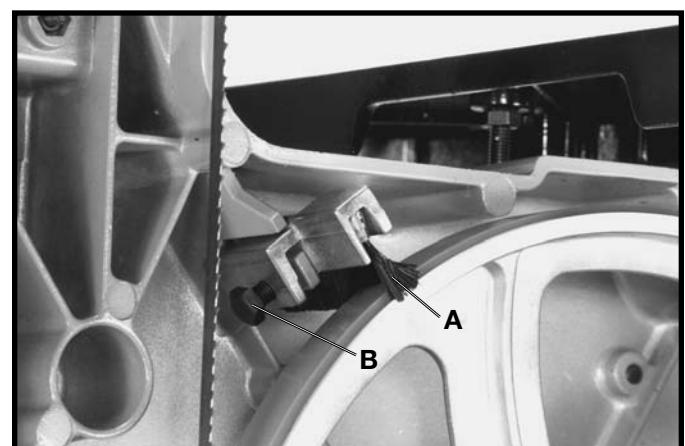


Fig. 38

WRENCH STORAGE

The hex wrench (A) supplied with your band saw can be stored inside the wheel cover, as shown in Fig. 39.

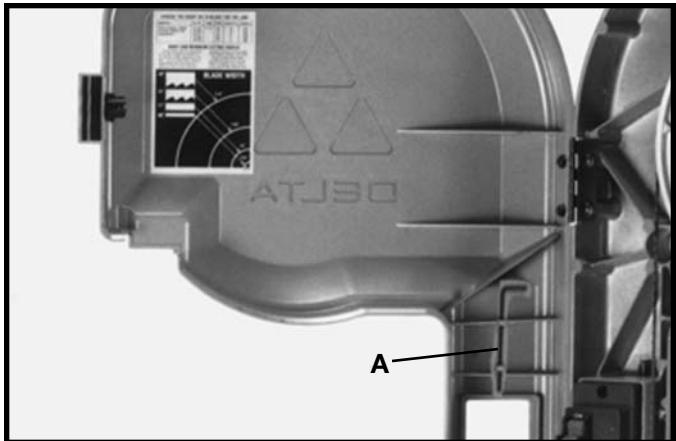


Fig. 39

DUST CHUTE

A dust chute (A) Fig. 40, is provided which enables you to connect your band saw to a standard shop vacuum or dust collector. The opening of the dust chute is 2-1/4" I.D.

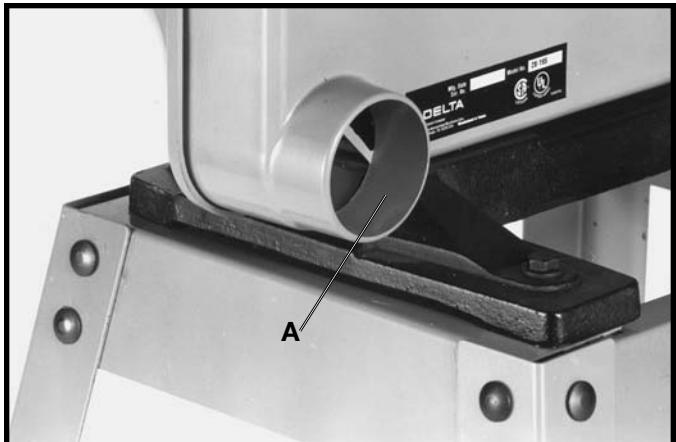


Fig. 40

MITER GAGE

A miter gage (A) Fig. 41, is supplied with your band saw. The miter gage body (C) can be adjusted up to 45 degrees right and left by loosening lock knob (B), rotating miter gage body (C) to the desired angle, and tightening lock knob (B).

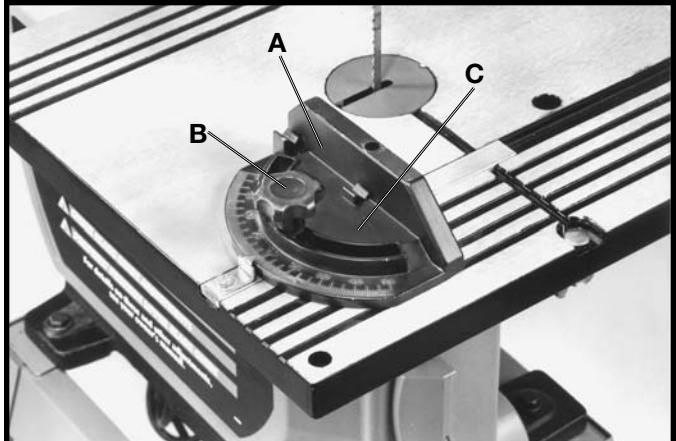


Fig. 41

A useful operation when using the miter gage to cut wide workpieces is to rotate the miter gage 180 degrees. This provides more support for the workpiece on the table, as shown in Fig. 42.

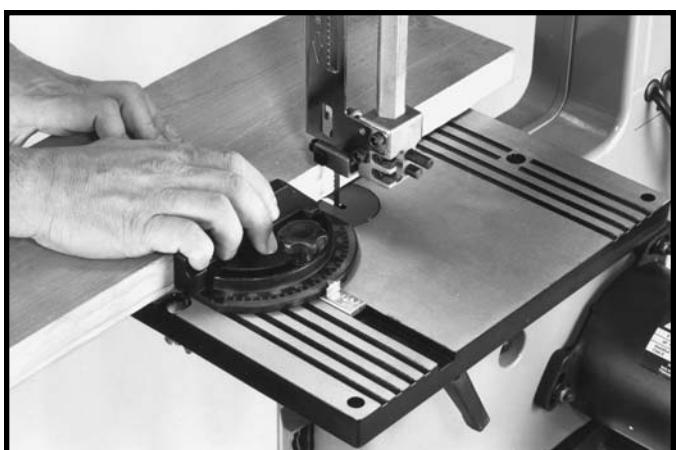


Fig. 42

ACCESSORY 28-196 RIP FENCE

An ideal accessory for use with your band saw is the 28-196 Rip Fence, shown in Fig. 43. It can be moved along the table surface by loosening lock lever (A), moving the fence (B) to the desired location and tightening lock lever (A).

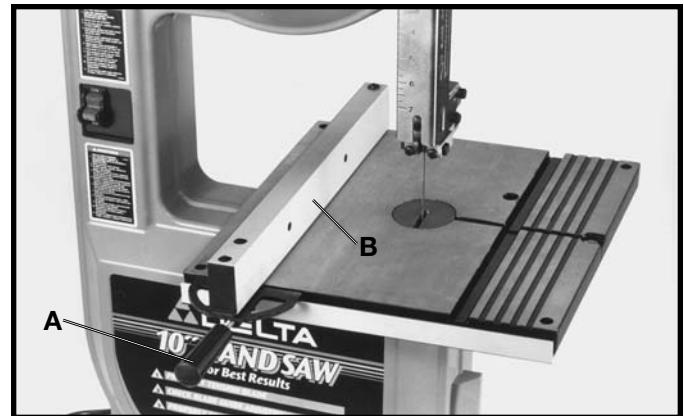


Fig. 43

OPERATING THE BAND SAW

Before starting the machine, see that all adjustments are properly made and the guards are in place. Turn the upper wheel by hand to make sure that everything is correct **BEFORE** turning on the power.

Keep the top guide down close to the work at all times. Do not force the material against the blade too hard. Light contact with the blade will permit easier following of the line and prevent undue friction, heating and work-hardening of the blade at its back edge.

KEEP THE SAW BLADE SHARP and you will find that very little forward pressure is required for average cutting. Move the stock against the blade steadily and no faster than will give an easy cutting movement.

Avoid twisting the blade by trying to turn sharp corners. Remember, you must saw around corners.

CUTTING CURVES

When cutting curves, turn the stock carefully so that the blade may follow without being twisted. If a curve is so abrupt that it is necessary to repeatedly back up and cut a new kerf, either a narrower blade is needed or a blade with more set is required. The more set a blade has, the easier it will allow the stock to be turned, but the cut is usually rougher than where a medium amount of set is used.

In withdrawing the piece being cut, in order to change the cut, or for any other reason, the operator must be careful that he does not accidentally draw the blade off the wheels. In most cases, it is easier and safer to turn the stock and saw out through the waste material, rather than try to withdraw the stock from the blade.

BAND SAW BLADES

A band saw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain long use from a band saw blade if you give it fair treatment. Be sure you use blades of the proper thickness, width and temper for the various types of material to be cut.

Always use the widest blade possible. Use the narrow blades only for sawing small, abrupt curves and for fine, delicate work. This will save blades and will produce better work. Band saw blades may be purchased, welded, set and sharpened ready for use. For cutting wood and similar materials, Delta can supply blades in widths of 1/8, 1/4, 3/8, and 1/2 inches.

Any one of a number of conditions may cause a band saw blade to break. Blade breakage is, in some cases, unavoidable, being the natural result of the peculiar stresses to which such blades are subjected. It is, however, often due to avoidable causes, most often to lack of care or judgment on the part of the operator in mounting or adjusting the blade or guides. The most common causes of blade breakage are: (1) faulty alignments and adjustments of the guides; (2) forcing or twisting a wide blade around a curve of short radius; (3) feeding too fast; (4) dullness of the teeth or absence of sufficient set; (5) excessive tensioning of the blade; (6) top guide set too high above the work being cut; (7) using a blade with a lumpy or improperly finished braze or weld; and (8) continuous running of the saw blade when not in use for cutting.

Blades for the 28-195 are 72-1/2 inches long.

Always use a sharp blade. Keep it free from gum and pitch. Keep the tires free of sawdust, gum, and pitch accumulation. Clean frequently with a stiff fiber brush.

Narrow blades are used for cutting small circles or curves while the wider blades are best suited for straight cutting such as ripping.

Due to the low cost of blades, it is advisable to purchase new blades rather than attempt to have them sharpened.

Make sure the blade guides are always adjusted properly as previously outlined.

Do not force or twist the blade around a curve or a very short radius.

Feed the work uniformly, allowing the blade to cut – do not feed too fast.

Do not apply excessive tension on blades. The tension is only necessary to drive the blade without slipping on the wheels. Narrow blades require less tension than wider blades.

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.



WARNING: Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.



PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable • Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-223-7278 (In Canada call 1-800-463-3582).



Two Year Limited Warranty

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

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